

ANNE MILGRAM
ATTORNEY GENERAL OF NEW JERSEY
Richard J. Hughes Justice Complex
25 Market Street
PO Box 093
Trenton, NJ 08625-0093
Attorney for Department of
Environmental Protection

By: Rachel Jeanne Lehr
Deputy Attorney General
(609) 984-5016

UNITED STATES BANKRUPTCY COURT
DISTRICT OF NEW JERSEY

<hr/>	:	Chapter 11
In re Shapes/Arch Holdings	:	
L.L.C. et al.,	:	Case No. 08-14631 (GMB)
	:	
Debtors.	:	Honorable Gloria M. Burns
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RESPONSE OF THE STATE OF NEW JERSEY, DEPARTMENT OF ENVIRONMENTAL PROTECTION ("DEPARTMENT" or "DEP"), TO THE OBJECTION OF DEBTORS TO THE PROOF OF CLAIM FILED BY THE DEPARTMENT.

The State of New Jersey, Department of Environmental Protection, hereby responds to the motion of the debtors objecting to and seeking to expunge the Proof of Claim filed by the Department on May 14, 2008 for Natural Resource Damages, Claim No. 603 in the Claims Register. In support of this claim, the Department respectfully represents as follows.

1. The Department's claim is for the costs, including reasonable assessment costs, it has incurred, or will incur, for the restoration and replacement, where practicable, of any natural

resource damaged or destroyed by the discharges at the real property located at 900 River Road, Delair, New Jersey, ("the Site"). Under applicable federal and state environmental statutes and regulations, including the New Jersey Spill Compensation and Control Act ("the Spill Act"), N.J.S.A. 58:10-23.11 et seq., the Debtor ("the Debtor") as the owner and operator is liable for such natural resource damages.

2. The Debtor manufactured aluminum products at the Site and from 1986 to 1989 committed 80 discharge violations of its New Jersey Pollutant Discharge Elimination System ("NJPDDES") permit, and was fined almost \$2,000,000. Significant discharges of chromium-contaminated wastewater occurred in 1986.

3. The supporting exhibits documenting the Department's claim were inadvertently left out at the time the Proof of Claim was filed but are included here as Exhibits A through E.

4. Attached as Exhibit A is an affidavit from Richard F. Engel, Deputy Attorney General, and Chief of the Cost Recovery/Natural Resource Damages Section of the Division of Law in the Attorney General's office.

5. As DAG Engel explains, DEP estimated that the number of acres required to compensate the public for the injury to ground water at the Aluminum Shapes Site is 62.46 acres. In this calculation, DEP used a 40-acre areal extent of chromium contamination in the ground water above predischARGE

concentrations, an injury start date of 1986 (the year chromium contamination was first confirmed through monitoring well sampling), a maximum extent of injury year of 1986, and an injury end year of 2038 (30 years from the present; this is conservative since chromium is an inorganic and does not degrade, and since significant chromium contamination exists beneath a building that will continue to act as a source of ground water contamination). The total period of injury from 1986-2038 is 52 years. See Exhibit A.

6. The Department could have used a much larger areal extent of chromium contamination for its calculation of the total amount of damages owed to the public because the debtor is also a possible responsible party of the Puchak and Morris-Delair wellfields. Puchak is one half mile to the south west and Morris-Delair is one half mile to the north west of the Site. The Department, however, decided to use the 40 acre figure, which resulted in a significantly lower number than the \$7,000,000 figure for which it filed the proof of claim in May.

7. The volume of injured groundwater was determined for each year of the injury by multiplying the surface area of the plume by the recharge rate for the water supply management region in which the Site is located. The water supply management area in which this Site is located has a recharge rate of 10.57 gallons per square foot per year.

8. The present value volume of injured groundwater for each year is calculated by multiplying the volume of injured ground water for that year by a discount rate of three percent, a rate that government agencies, acting as natural resource trustees, have generally adopted for damage assessment purposes.

9. The total present value volume for the injury is the sum of the present value of injured ground water for all of the years for which the ground water exceeds predischARGE concentrations.

10. The annual replacement volume, the volume of uncontaminated water that would need to be made available annually in perpetuity to replace the total present value loss of groundwater over the 52-year duration of the the injury, was calculated by dividing the present value volume of water needed on an annual basis in perpetuity by the annual recharge rate. By dividing the annual replacement volume by the regional recharge rate and converting the result to acres by dividing the number by 43,560, the number of square feet in an acre, the Department was able to calculate the number of acres of land necessary for preservation to provide recharge area protection in compensation for the amount of groundwater injury at this Site for a 52-year injury. For calculation of the injury using the volume of the injured water, the surface area of the plume and the recharge rate, see Exhibits B and C.

11. In order to estimate how much it would cost to purchase or preserve that many acres of undeveloped land in Water Supply Protection Area 17, where the Site is located, the Department derived a per acre dollar cost of \$37,213, and multiplied that number times the required acreage, resulting in a dollar value for our acreage demand of \$2,324,324. Calculated in this way the number arrived at is significantly lower than the number arrived at previously.

12. For calculation of the future loss, see Exhibit D.

13. For calculation of past loss, see Exhibit E.

Respectfully submitted,

ANNE MILGRAM
ATTORNEY GENERAL OF NEW JERSEY

By: /S/ Rachel Jeanne Lehr
Deputy Attorney General

Dated: December 29, 2008

E X H I B I T A

ANNE MILGRAM
ATTORNEY GENERAL OF NEW JERSEY
Richard J. Hughes Justice Complex
25 Market Street
PO Box 093
Trenton, NJ 08625-0093
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Environmental Protection

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AFFIDAVIT OF RICHARD F. ENGEL

Richard F. Engel, of full age, being duly sworn according to law, deposes and says:

1. I am a Deputy Attorney General assigned to work on the Shapes matter.

2. As part of that assignment, I asked Elizabeth Fernandez of the New Jersey Department of Environmental Protection to describe how DEP calculated the demand for natural resource damages at the Shapes Site. The description below is how she said she calculated that demand.

3. DEP has determined the number of acres necessary to acquire/protect to compensate for a 40-acre injury (the area of the site). DEP generated cost-per-acre estimates.

4. DEP estimated that the number of acres required to compensate the public for the injury to ground water at the Aluminum Shapes site is 62.46 acres. In this calculation, it used a 40-acre areal extent of chromium contamination above pre-discharge levels, an injury start date of 1986 (the year chromium contamination was first confirmed through monitoring well sampling), a maximum injury year of 1986, and an injury end year of 2038 (30 years from the present; this is conservative since chromium is an inorganic and does not degrade, and since significant chromium contamination exists beneath a building, which will continue to act as a source of ground water contamination). The total period of injury from 1986 - 2038 is 52 years.

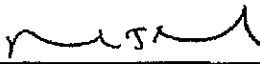
5. The volume of injured ground water was determined for each year of the injury by multiplying the surface area of the plume for that year by the regional recharge rate (10.57 gal/sq ft/yr for the water supply management region in which the site is located). The present value volume of injured ground water for each year is calculated by multiplying the volume of injured ground water for that year by a discount rate of three percent, a rate that government agencies, acting as natural resource trustees, have generally adopted for damage assessment purposes. The total present value volume for the injury is the sum of the present value of injured ground water for all of the years during which the ground water has been injured. The annual replacement volume

(volume of uncontaminated water that would need to be made available annually in perpetuity to replace the total present value loss of ground water over the period of the injury) was calculated by dividing the present value volume of water needed on an annual basis in perpetuity by the annual recharge rate. By dividing the annual replacement volume by the regional recharge rate and converting the result to acres by dividing the number by 43,560 (number of square feet in an acre), DEP was able to calculate the number of acres of land necessary for preservation to provide recharge area protection in compensation for the amount of groundwater injury at this site.

6. In order to estimate how much it would cost to purchase or preserve that many acres of undeveloped land in WSPA 17, where the site is located, DEP derived a per-acre dollar cost - \$37,213 - and multiplied that number times the required acreage, resulting in a dollar value for its acreage demand of \$2,324,324. Note that this figure is significantly lower than the \$7M figure we provided earlier, because DEP this time used a much larger universe of property sales (over 300 v. the previous 3) over a 4-year period of time.

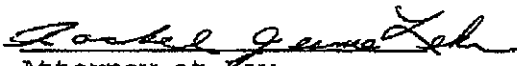
7. To obtain the per-acre figure of \$37,213, DEP obtained data on 331 sales of undeveloped land in WSPA 17 between 2004 and 2008 from a public New Jersey tax records search website. Sales prices were converted to 2008 dollars using a housing price

inflator for New Jersey obtained from the Office of Federal Housing Enterprise Oversight (<http://www.ofheo.gov/>). DEP calculated the 25th percentile (\$37,213), median (\$98,108) and mean (\$325,282) values for estimating the per-acre cost of 62.46 acres of property in WSPA 17. DEP chose to use the 25th percentile per-acre figure of \$37,213 to determine the dollar value for its acreage demand. Selection of a value at the 25th percentile means that the per-acre value is in the bottom 25 percent of the transaction data as adjusted for 2008 values.



Richard F. Engel

Sworn to and subscribed
before me this 29th day
December, 2008



Attorney at Law
State of New Jersey

E X H I B I T B

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12/23/2008

Aluminum Shapes

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User Inputs

Watershed Management Region (select name -- see map)	Lower Delaware	
Current Year	2008	
Injury Start (year)	1986	
Maximum Injury (year)	1986	
Injury End (year)	2038	
Current 2-D area of injury or Classification Exception Area (square feet) (1 acre = 43,560 square feet)	1,742,400	40.00 ACRES
Assumed future plume dynamics	Constant area	
Discount rate	0.03	
Groundwater recharge	10.57	gal /sq ft / yr

Results

Present value volume of unavailable water, 1986 to 2038	958,266,693 gals
Annual replacement volume (in perpetuity)	28,748,001 gals
Land area required to provide recharge equal to annual replacement volume	62.46 acres

Methodology

- (1) Calculate present value volume of groundwater unavailable over period of injury.
- (2) Calculate constant annual replacement volume, available in perpetuity, such that present value sum of annual replacement volumes is equal to present value volume of unavailable groundwater (determined by multiplying the result of calculation (1) by the discount rate).
- (3) Assume equivalent recharge at replacement location and determine area of land necessary to acquire/protect by dividing the result of calculation (2) by the regional recharge rate and converting that result to acres (divide by 43,560 sq ft/acre).

E X H I B I T C

ALUMINUM SHAPES - PRELIMINARY GROUNDWATER INJURY CALCULATION

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Step 1: Volume of Injured Water in Year N		Surface Area of Plume in Year N	x	Recharge Rate
See attached spreadsheets	=	See attached spreadsheets	x	8.93 gallons/square feet/year
Step 2: Present Value Volume of Injured Water in Year N		Volume of Injured Water in Year N	x	1 + Discount Rate (Current Year - Year N)
See attached spreadsheets	=	See attached spreadsheets	x	1 + 0.03 (Current Year - Year N)
Step 3: Total Present Value Volume of Injured Water		Sum the Present Value Volume of Injured Water for all Years During Which Water Has Been Injured		
Total Present Value Volume	=	958,266,693 gallons		
Step 4: Volume of Water Needed on an Annual Basis in Perpetuity to Replace Injured Ground Water		Total Present Value Volume of Injured Water at Site	x	Discount Rate
28,748,001 gallons/year	=	958,266,693 gallons	x	0.03
Step 5: Annual Recharge Rate		Recharge Rate	x	43,560 square feet/acre
460,429 gallons/acre/year	=	10.57 gallons/square foot/year	x	43,560 square feet/acre
Step 6: Acres of Land Requiring Protection at Replacement Site		Volume of Water Needed on Annual Basis in Perpetuity	Annual Recharge Rate	
62.4 acres	=	28,748,001 gallons/year	/	460,429 gallons/acre/year

E X H I B I T D

12/23/2008

FUTURE LOSS CALCULATIONS

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Aluminum Shapes					
Year	Area of loss -- start of year (sq ft)	Area of loss -- end of year (sq ft)	Average annual area of loss (sq ft)	Unavailable volume (gals)	Present value unavailable volume (gals)
2009	1,742,400	1,742,400	1,742,400	18,409,327	17,873,133
2010	1,742,400	1,742,400	1,742,400	18,409,327	17,352,557
2011	1,742,400	1,742,400	1,742,400	18,409,327	16,847,142
2012	1,742,400	1,742,400	1,742,400	18,409,327	16,356,449
2013	1,742,400	1,742,400	1,742,400	18,409,327	15,880,047
2014	1,742,400	1,742,400	1,742,400	18,409,327	15,417,522
2015	1,742,400	1,742,400	1,742,400	18,409,327	14,988,468
2016	1,742,400	1,742,400	1,742,400	18,409,327	14,532,493
2017	1,742,400	1,742,400	1,742,400	18,409,327	14,109,216
2018	1,742,400	1,742,400	1,742,400	18,409,327	13,698,268
2019	1,742,400	1,742,400	1,742,400	18,409,327	13,299,230
2020	1,742,400	1,742,400	1,742,400	18,409,327	12,911,932
2021	1,742,400	1,742,400	1,742,400	18,409,327	12,535,856
2022	1,742,400	1,742,400	1,742,400	18,409,327	12,170,734
2023	1,742,400	1,742,400	1,742,400	18,409,327	11,816,247
2024	1,742,400	1,742,400	1,742,400	18,409,327	11,472,084
2025	1,742,400	1,742,400	1,742,400	18,409,327	11,137,946
2026	1,742,400	1,742,400	1,742,400	18,409,327	10,813,540
2027	1,742,400	1,742,400	1,742,400	18,409,327	10,498,582
2028	1,742,400	1,742,400	1,742,400	18,409,327	10,192,798
2029	1,742,400	1,742,400	1,742,400	18,409,327	9,895,921
2030	1,742,400	1,742,400	1,742,400	18,409,327	9,607,690
2031	1,742,400	1,742,400	1,742,400	18,409,327	9,327,854
2032	1,742,400	1,742,400	1,742,400	18,409,327	9,056,169
2033	1,742,400	1,742,400	1,742,400	18,409,327	8,792,397
2034	1,742,400	1,742,400	1,742,400	18,409,327	8,536,308
2035	1,742,400	1,742,400	1,742,400	18,409,327	8,287,878
2036	1,742,400	1,742,400	1,742,400	18,409,327	8,046,289
2037	1,742,400	1,742,400	1,742,400	18,409,327	7,811,931
2038	1,742,400	1,742,400	1,742,400	18,409,327	7,584,399

E X H I B I T E

12/23/2008

PAST LOSS CALCULATIONS

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Aluminum Shapes					
Year	Area of loss -- start of year (sq ft)	Area of loss -- end of year (sq ft)	Average annual area of loss (sq ft)	Unavailable volume (gals)	Present value unavailable volume (gals)
1986	1,742,400	1,742,400	1,742,400	18,409,327	35,274,175
1987	1,742,400	1,742,400	1,742,400	18,409,327	34,246,771
1988	1,742,400	1,742,400	1,742,400	18,409,327	33,249,293
1989	1,742,400	1,742,400	1,742,400	18,409,327	32,280,867
1990	1,742,400	1,742,400	1,742,400	18,409,327	31,340,647
1991	1,742,400	1,742,400	1,742,400	18,409,327	30,427,813
1992	1,742,400	1,742,400	1,742,400	18,409,327	29,541,566
1993	1,742,400	1,742,400	1,742,400	18,409,327	28,681,132
1994	1,742,400	1,742,400	1,742,400	18,409,327	27,845,759
1995	1,742,400	1,742,400	1,742,400	18,409,327	27,034,718
1996	1,742,400	1,742,400	1,742,400	18,409,327	26,247,299
1997	1,742,400	1,742,400	1,742,400	18,409,327	25,482,314
1998	1,742,400	1,742,400	1,742,400	18,409,327	24,740,596
1999	1,742,400	1,742,400	1,742,400	18,409,327	24,019,996
2000	1,742,400	1,742,400	1,742,400	18,409,327	23,320,385
2001	1,742,400	1,742,400	1,742,400	18,409,327	22,641,150
2002	1,742,400	1,742,400	1,742,400	18,409,327	21,981,639
2003	1,742,400	1,742,400	1,742,400	18,409,327	21,341,456
2004	1,742,400	1,742,400	1,742,400	18,409,327	20,719,860
2005	1,742,400	1,742,400	1,742,400	18,409,327	20,116,369
2006	1,742,400	1,742,400	1,742,400	18,409,327	19,530,455
2007	1,742,400	1,742,400	1,742,400	18,409,327	18,961,607
2008	1,742,400	1,742,400	1,742,400	18,409,327	18,409,327